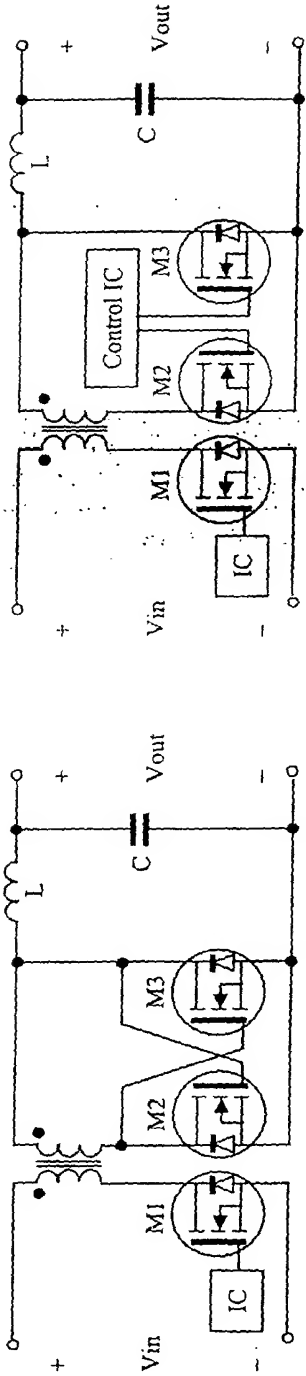


Figure 1



IC-driven synchronous rectification isolated forward converter

Self-driven synchronous rectification isolated forward converter

1A / B

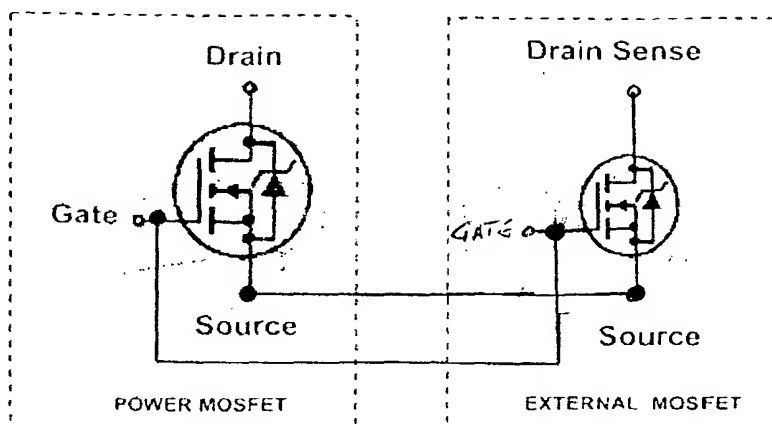


FIG. 2

Figure 3

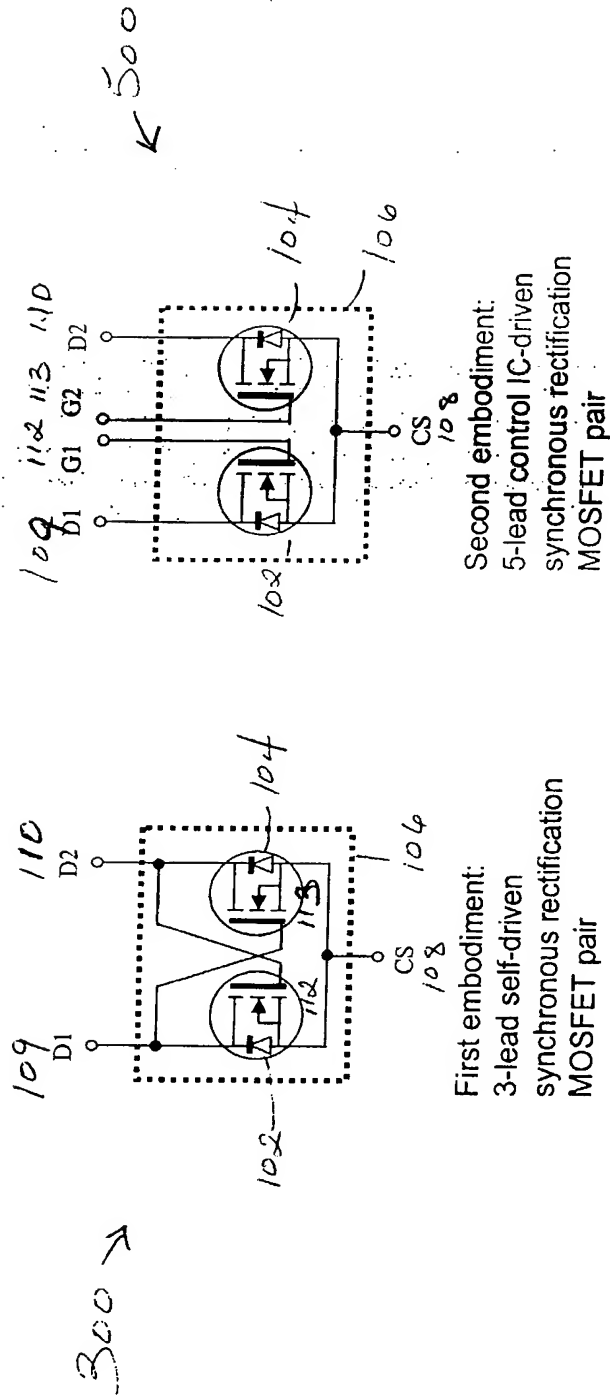


Figure 3a

Figure 3b

Figure 4

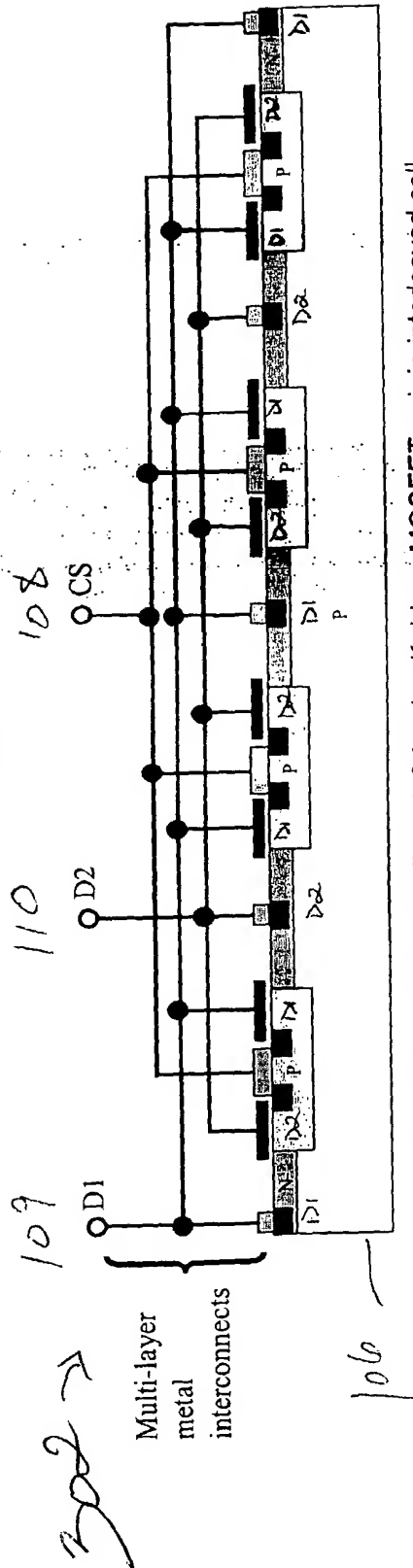


Figure 4a: First embodiment: 3-lead self-driven MOSFET pair in interleaved cell fingers

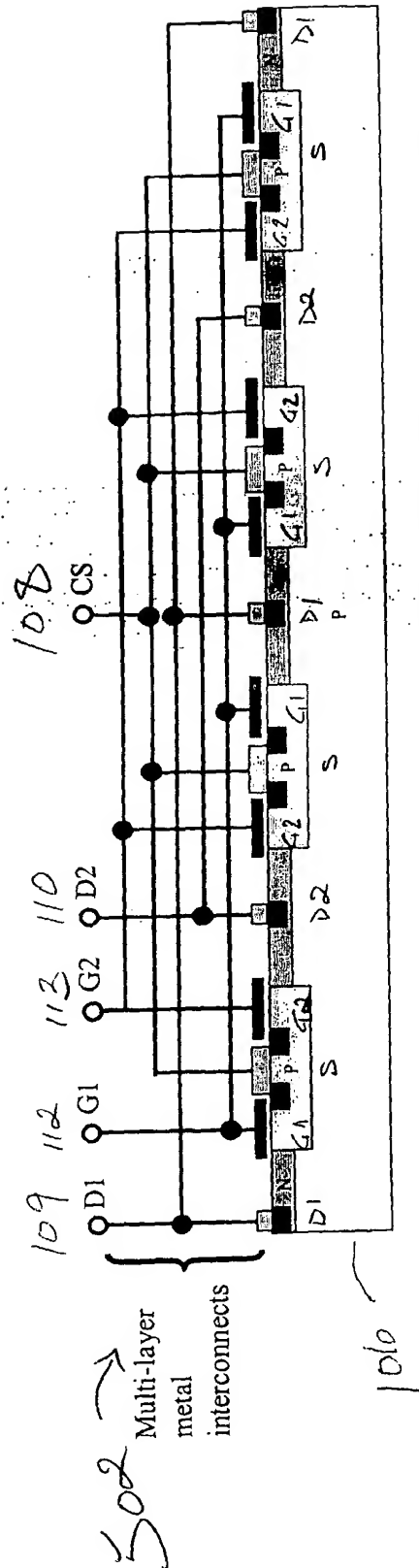


Figure 4b: Second embodiment: 5-lead external-driven MOSFET pair in interleaved cell fingers

Figure 5

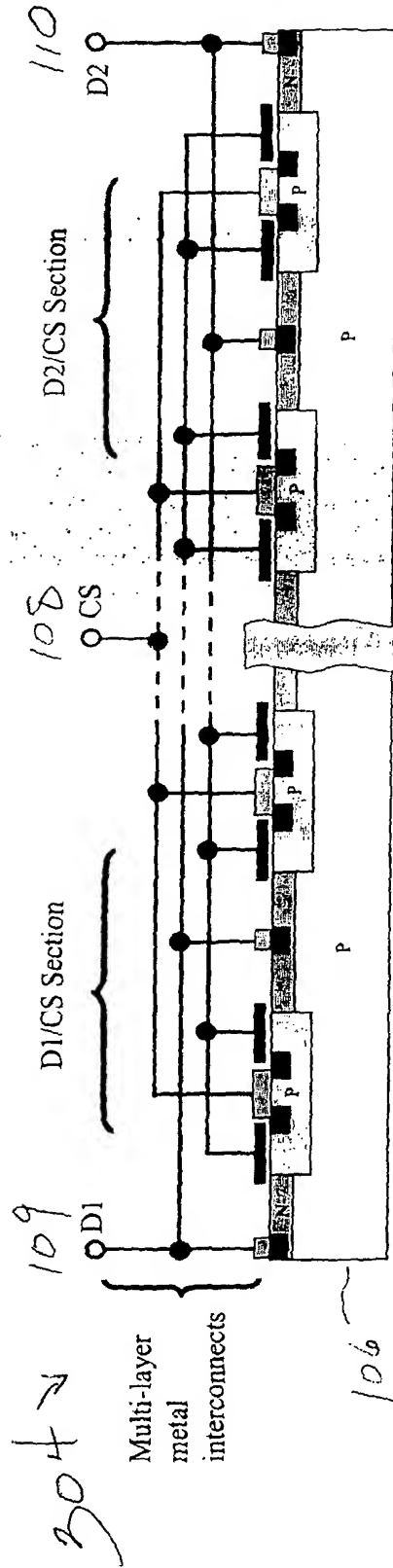


Figure 5a: Third embodiment: 3-lead self-driven MOSFET pair in separate cell sections

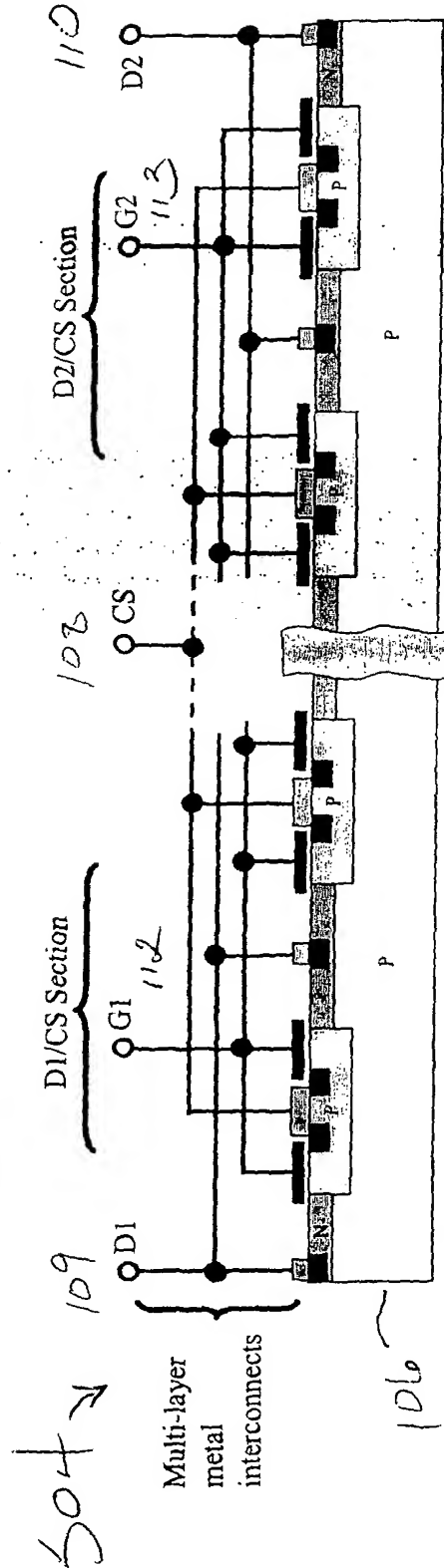


Figure 5b: Fourth embodiment: 5-lead external-driven MOSFET pair in separate cell sections

1. Discrete power semiconductor device comprised of multiple transistors with common Source connection with one or more transistors having electrically isolated Drain and Gate connections

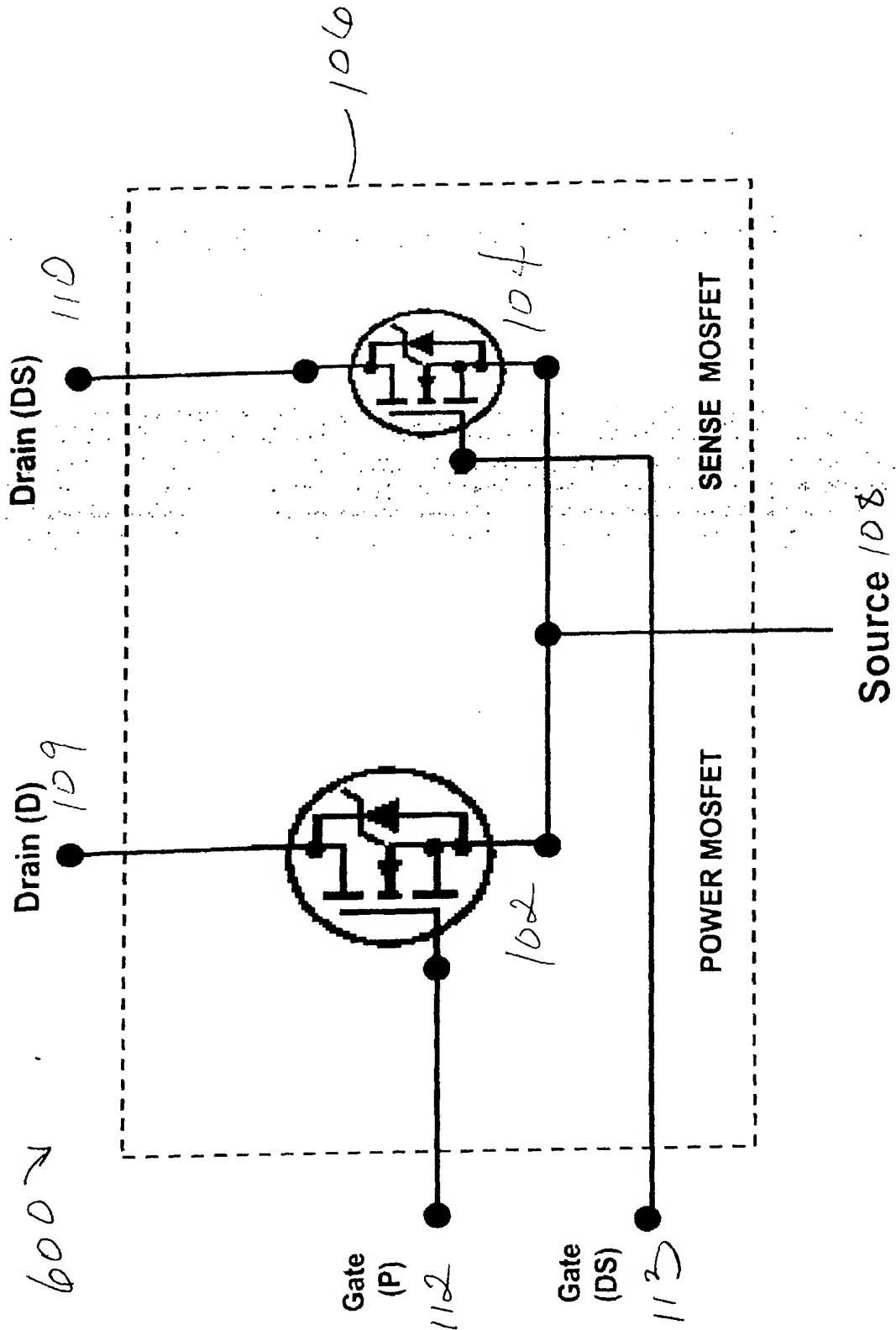


FIG 6

1. Discrete power semiconductor device comprised of multiple transistors with common Source connection with one or more transistors having electrically isolated Drain and Gate connections

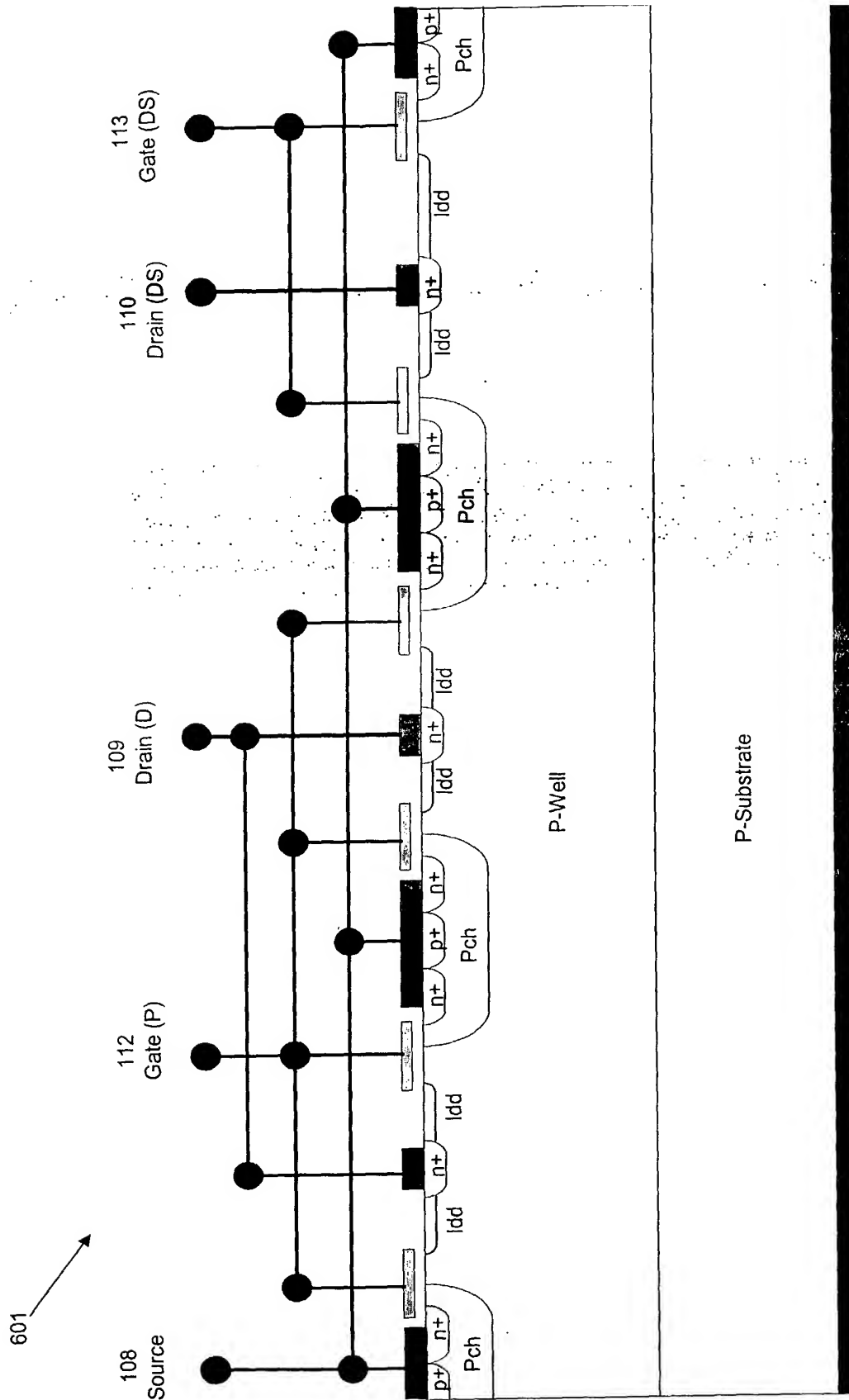
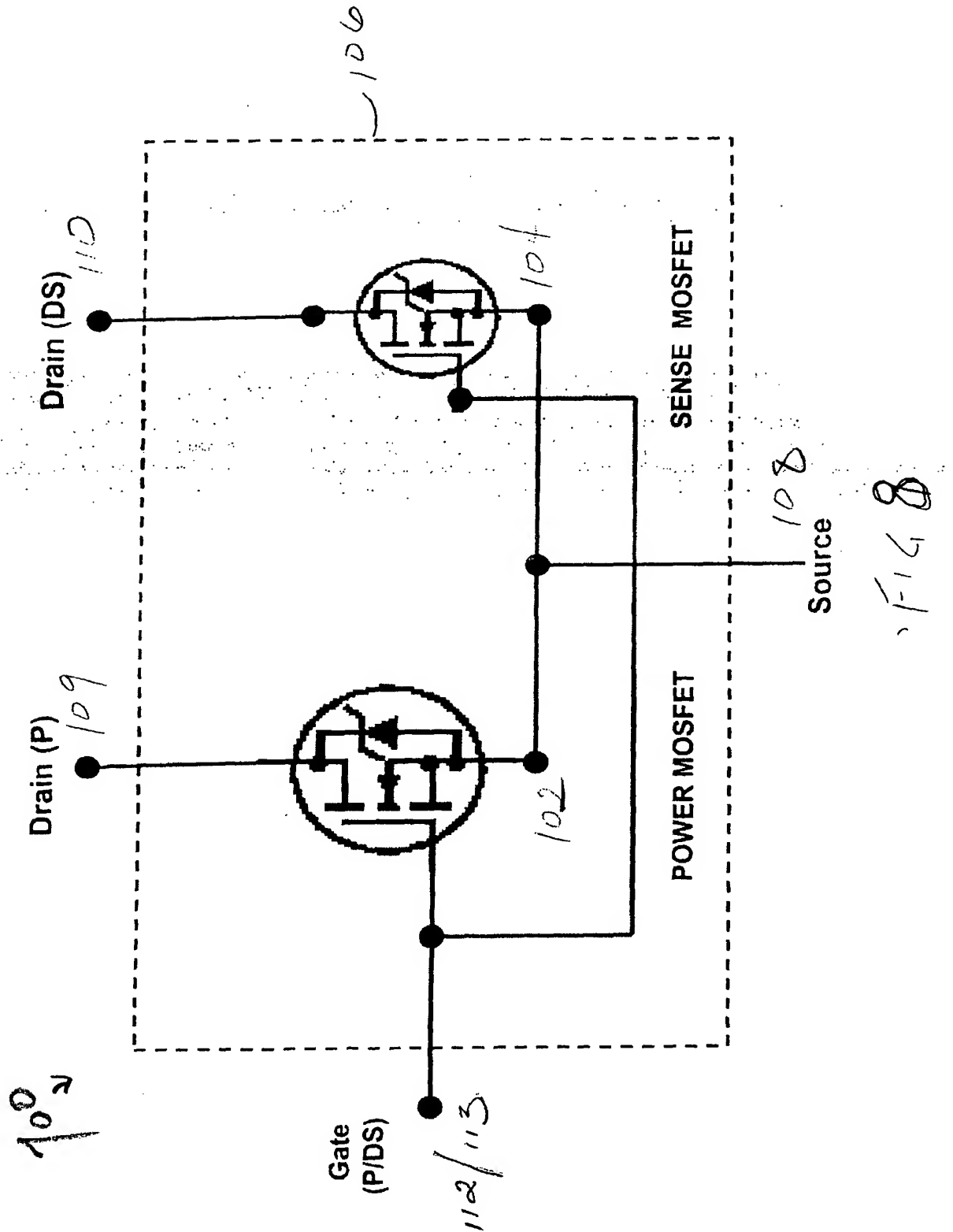


Figure 7

Cross-Sectional Diagram of a Power MOSFET With Integrated Drain Sense

2. Discrete power semiconductor device comprised of multiple transistors with common Source and Gate connections with one or more transistors having electrically isolated Drain connections





2. Discrete power semiconductor device comprised of multiple transistors with common Source and Gate connections with one or more transistors having electrically isolated Drain connections

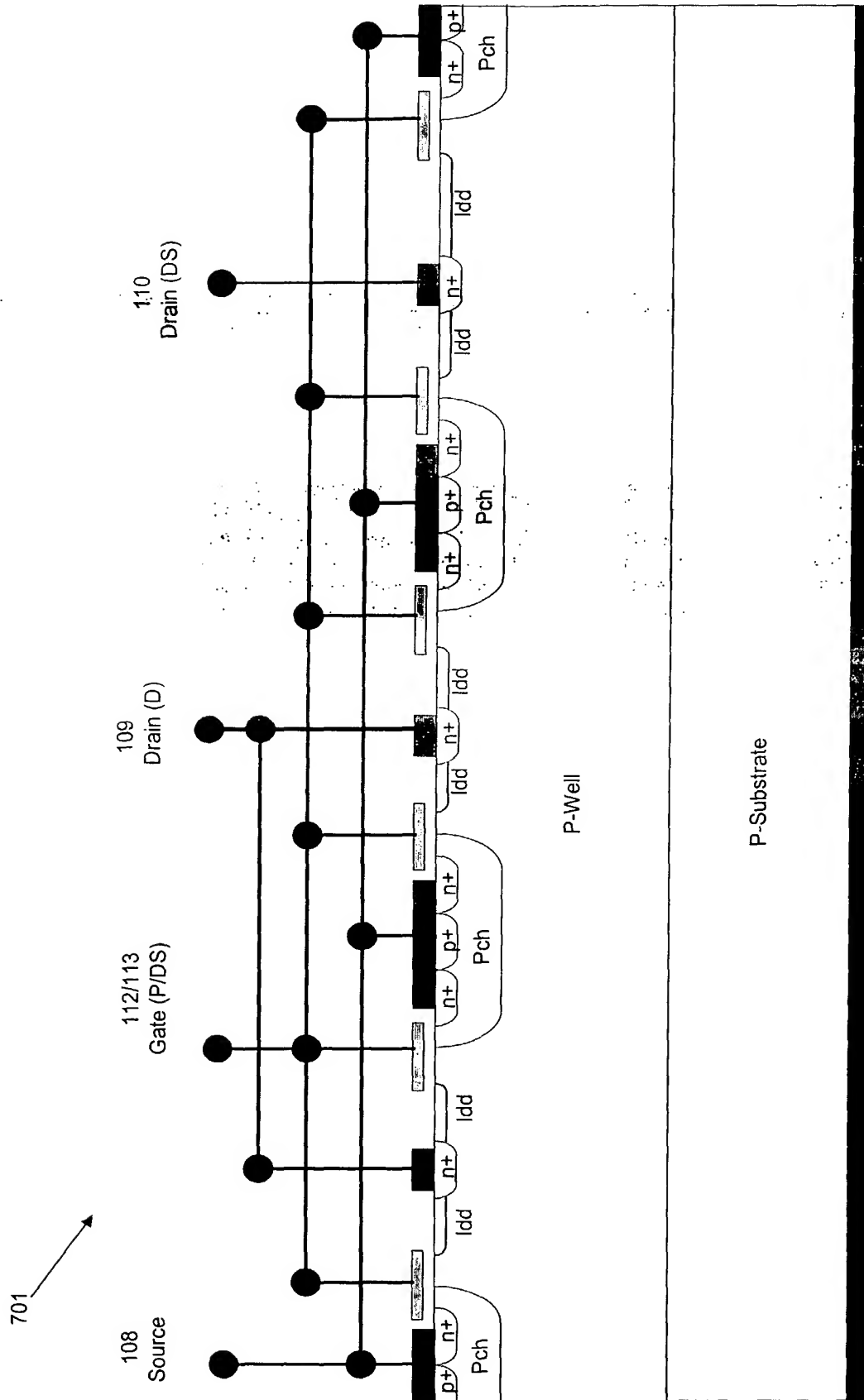
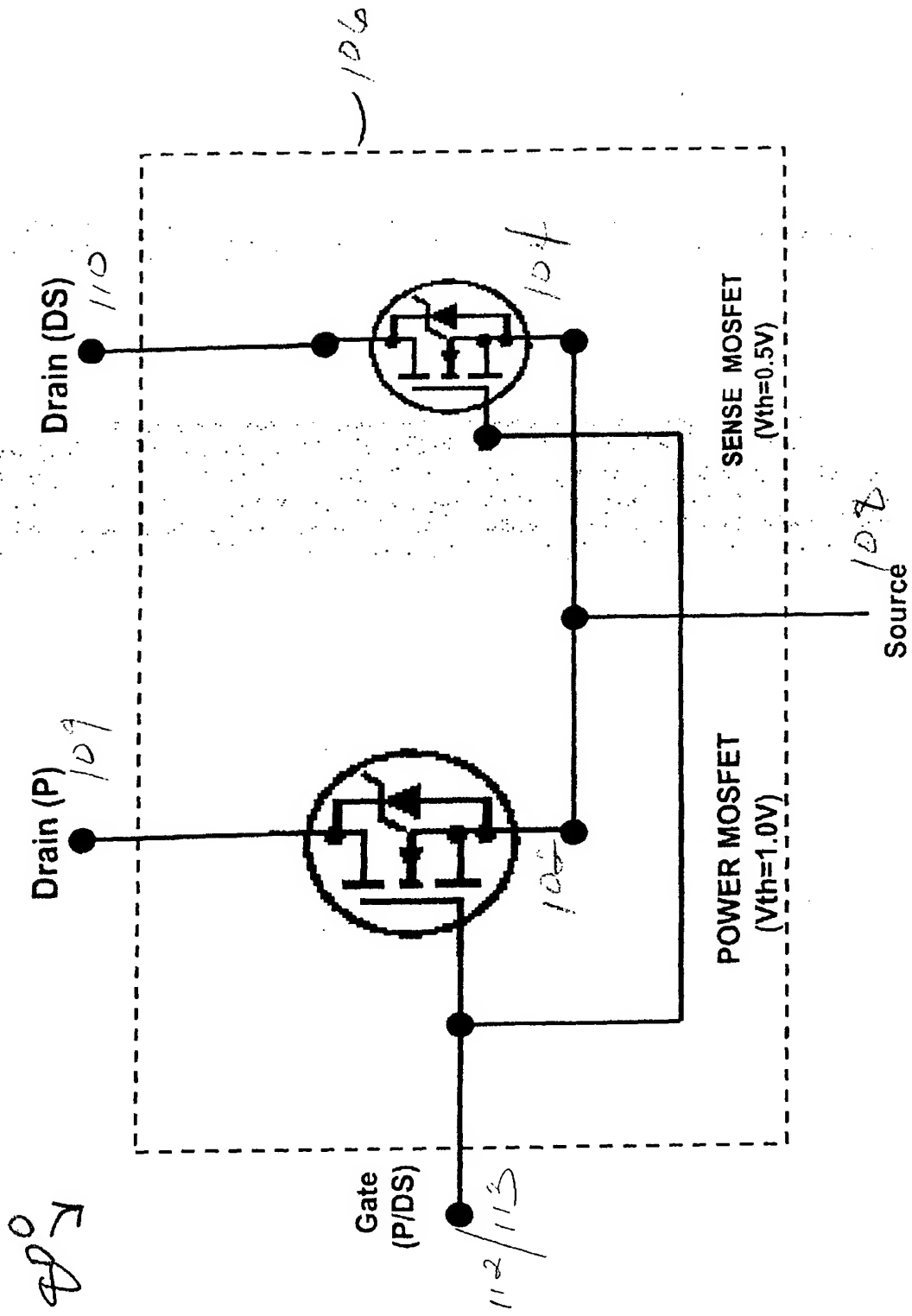


Figure 9  
Cross-Sectional Diagram of a Power MOSFET With Integrated Drain Sense

3. Discrete power semiconductor device comprised of multiple transistors with common Source and Gate connections with one or more transistors having substantially different threshold voltages and electrically isolated Drain connections



3. Discrete power semiconductor device comprised of multiple transistors with common Source and Gate connections with one or more transistors having substantially different threshold voltages and electrically isolated Drain connections

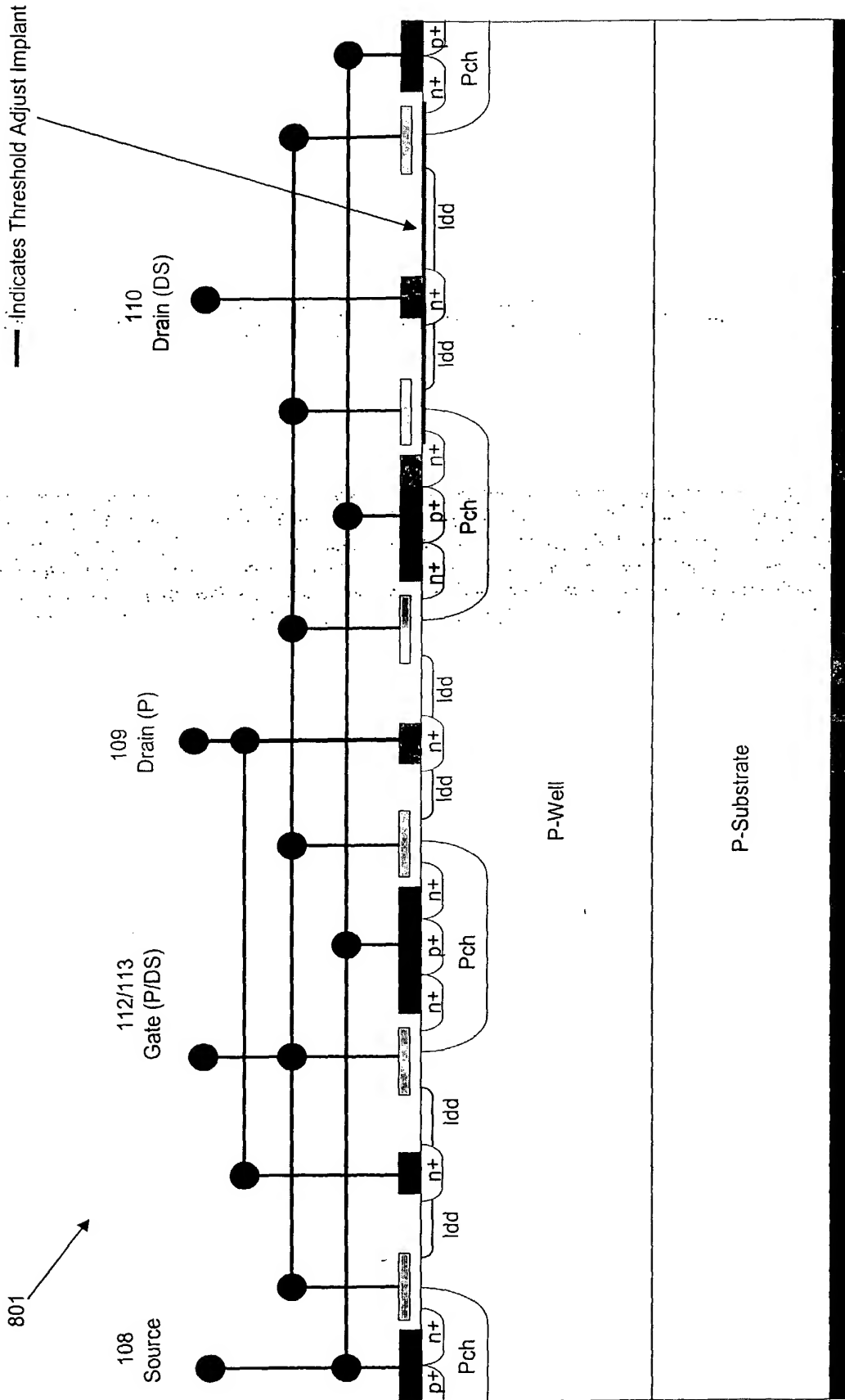


Figure 11

Cross-Sectional Diagram of a Power MOSFET With Integrated Drain Sense